

TECHNICAL REVIEW DOCUMENT
For
RENEWAL OF OPERATING PERMIT 95OPPR074

Colorado Interstate Gas Company – Springfield Compressor Station
Prowers County
Source ID 0990003

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Revised October 2002

I. Purpose

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued October 1, 1997, and expires on October 1, 2002. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted September 6, 2001, comments on the draft operating permit and technical review document received September 24, 2002, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

The facility is a natural gas compression facility as defined under Standard Industrial Classification 4922. Gas is compressed to specification for transmissions to sales pipelines using four (4) internal combustion engines to power compressor units. Other significant emission units at the facility consist of

two (2) internal combustion engines to power electric generators. Based on the information available to the Division and provided by the applicant, it appears that no modifications to these emission units has occurred since the original issuance of the operating permit.

This facility is classified as a natural gas transmission facility but is not subject to the provisions of 40 CFR Part 63 Subpart HHH, since there is no glycol dehydrator at this facility.

In the 1990 Clean Air Act, EPA was charged with promulgating MACT standards for various source categories by a given deadline and provisions were included to require States to develop case-by-case MACT determinations for any source categories that EPA failed to complete by the deadline. These provisions are referred to as the "MACT hammer". Since EPA has not promulgated final MACT standards for internal combustion engines by the specified deadline, the "MACT hammer" is triggered for any major source for HAPS that has internal combustion engines at their facility. Sources that could reasonably determine that they are a major source for HAPS and fall under a covered source category were required to submit a Part 1 permit application by May 15, 2002. Colorado Interstate Gas submitted a Part 1 application. It should be noted that the source submitted the notification to meet the regulatory deadline for submittal of a Part I application but upon promulgation of the MACT standard for internal combustion engines may revise the major source status of this facility.

None of the significant emission units at this facility are equipped with control devices, therefore the Compliance Assurance Monitoring (CAM) requirements do not apply to any emission units at this facility.

The facility is located in Prowers County about 30 miles southwest of Lamar, CO in an area designated as attainment for all criteria pollutants. There are no federal Class I designated areas within 100 km of this facility. Kansas, an affected state, is within 50 miles of this facility.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to more appropriately identify the potential to emit (PTE) since AP-42 emission factors for the engines have changed. Emissions (in tons/yr) at the facility are as follows:

Pollutant	Potential to Emit	Actual Emissions
NO _x	639.4	436.2
CO	773.4	344.2
VOC	23	17.2

The PTE for the engines is based on emission factors, maximum design rate (mmSCF/hr), a gas heating value of 1064 Btu/SCF (from technical review document for the original operating permit issued October 1, 1997) and 8760

hrs/yr of operation. Actual emissions for the engines are based on APENs submitted October 13, 2000 (based on 1999 data).

III. Discussion of Modifications Made

Source Requested Modifications

The source's requested modifications identified in the renewal application were addressed as follows:

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CIG requested that a primary and secondary Responsible Official be identified in the permit for more flexibility in completing the required certifications. The Division will grant this request. However, CIG should be aware that whichever Responsible Official signs the documents, that person becomes the responsible party regarding any non-compliance situation related to the Operating Permit and is subject to both civil and criminal penalties that may be associated with non-compliance situations. In addition, the permit contact was changed.

Appendix A

CIG indicated that a 500 gal diesel fuel tank was added to the facility since the permit was issued and requested that this tank be reflected in the list of insignificant activities. CIG indicated that the tank qualifies under the insignificant activity exemption under Colorado Regulation No. 3, Part C, Section II.E.3.fff. The Division will modify the list of insignificant activities as requested by the source.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Springfield Renewal Operating Permit with the source's requested modifications. These changes are as follows:

Page following Cover Page

- The citation (above "issued to" and "plant site location") on the page following the cover page provides the incorrect title for the state act. The title will be changed from "Colorado Air Quality Control Act" to "Colorado

Air Pollution Prevention and Control Act". In addition, the dates were removed from the citation.

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I – General Activities and Summary

- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.
- Minor language changes were made to Condition 3.1 to more appropriately reflect the status of the source with respect to PSD. Specifically, the Division removed the statement indicating that "modifications up to this point in time have not triggered significance levels which would bring about PSD review", since EPA objected to this statement in their review of other Title V operating permits.
- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).
- Added a "new" Section 5 for compliance assurance monitoring (CAM), note that no emission units are subject to CAM.

Section II.1 – Internal Combustion Engines

- The emission factors identified in the current operating permit are AP-42 emission factors. Since the AP-42 emission factors for internal combustion engines were revised in July 2000, the emission factors identified in the operating permit will be updated to the current AP-42 emission factors.

The engines used to power the compressors are identified as 2-cycle rich burn engines. The technical review document prepared for the original operating permit issuance indicates that the source chose to use the highest emission factors for each pollutant from the 2-cycle lean burn and 4-cycle rich burn engines, since AP-42 did not identify emission factors for 2-cycle rich burn engines.

For engines that are grandfathered or exempt from construction permit requirements, the Division has allowed sources to use emission factors in g/hp-hr, lbs/mmSCF or lbs/mmBtu to calculate annual emissions for

purposes of APEN reporting. Since the emission factors in the current permit are in lbs/mmSCF, the Division will leave the emission factors in these units. Since current AP-42 emission factors are in lbs/mmBtu, the Division will convert these factors to lbs/mmSCF, based on a heat content of 1064 Btu/SCF as indicated in the technical review document for the original operating permit. The emission factors that will be included in the renewal operating permit are as follows:

Pollutant	Emission Factor (lbs/mmSCF)	Source
Compressor Engines		
NO _x	3,373	AP-42, Section 3.2, Table 3.2-1, dated July 2000, at 90-105% load
CO	3,958	AP-42, Section 3.2, Table 3.2-3, dated July 2000, at <90% load
VOC	128	AP-42, Section 3.2, Table 3.2-1, dated July 2000
Generator Engines		
NO _x	2,415	AP-42, Section 3.2, Table 3.2-3, dated July 2000. For NO _x , factor at < 90% load and for CO factor at 90-105% load
CO	3,958	
VOC	31.5	

- Reworded Condition 1.1 and included an equation to calculate emissions. In addition, under “monitoring method” in the Table “calculation” was replaced with “recordkeeping and calculation”.
- Changed the frequency of recording fuel consumption from monthly to annually. Since these units are only subject to APEN reporting requirements it is not necessary to record fuel consumption monthly. However, the source may certainly record fuel consumption more frequently than the permit requires, if they so desire.
- The language in Condition 1.2 was changed to indicate that individual and facility fuel meters are used to determine fuel consumption. Provisions were included to specify allocating fuel use for engines without individual fuel meters. In addition under “monitoring method” in the Table “recordkeeping” was replaced with “fuel meter and calculation”.
- The language regarding the monitoring for the 20% opacity requirement (Condition 1.3) was revised. The word “credible” was inserted before “evidence”. In addition, the standard was rewritten to more closely resemble the language in Regulation No. 1. At the request of the source,

the Division added a note to this condition specifying that natural gas is the only fuel used in these engines.

- Under “monitoring interval” in Table for Condition 1.3, replaced “annually” with “whenever natural gas is used as fuel”.
- Under “limitations” in Table for Condition 1.3, replaced “less than or equal to 20%” with “not to exceed 20%”. This is more consistent with the language in the regulation.

Note that no condition is included for the 30% opacity standard, which is applicable during certain operating activities. The specific activities under which the 30% opacity standard applies are: building a new fire, cleaning of fire boxes, soot blowing, startup, any process modification, or adjustment or occasional cleaning of control equipment. Based on engineering judgment the Division considers that building a new fire, cleaning of fire boxes and soot-blowing does not apply to the operation of internal combustion engines. In addition, these engines do not have control devices, so adjustment or occasional cleaning of control devices do not apply to these engines. Process modifications and startup may apply to engines, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

Section II.2 – Fugitive VOC Emissions from Equipment Leaks

“EPA’s Protocol for Equipment Leak Emission Estimates”, was updated in 1995. These revised emission factors predict lower emissions than the previous emission factors. Based on the change in emission factors and the component definitions that CIG and the Division agreed upon (see attached), VOC emissions from equipment leaks are now below APEN de minimis levels. Therefore, the conditions for Fugitive VOC emissions have been removed from Section II and are now included in the permit as an insignificant activity in Appendix A of the permit.

Section III – Permit Shield

- The title for Section 1 was changed from “Specific Conditions” to “Specific Non-Applicable Requirements” and a new section 3 was added for subsumed (streamlined) conditions. Note that there are no streamlined conditions.
- Based on comments made by EPA on another permit, the following phrase was added to the beginning of the introductory sentence in Section 1 “Based upon the information available to the Division and supplied by the applicant”.

- Based on comments made by EPA on another permit, the following statement was added after the introductory sentence in Section 1 “This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance”.
- In addition, the following phrase “In addition, this shield does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance” was added to the end of the introductory paragraph in Section 1.
- Based on comments made by EPA on another permit, the phrases regarding reconstruction or modification under the shield for NSPS K, Ka, Kb and KKK were removed. It is EPA’s opinion that the Division may not have all of the information available to determine whether a reconstruction or modification has occurred and as a result the justification should not address modifications or reconstructions.
- Based on comments made by EPA on another permit, the shield for the PSD review requirements has been removed from the permit. EPA indicated that the Division could not grant the shield for PSD review requirements, unless the source was an existing source prior to August 7, 1977. Although this facility was an existing stationary source prior to August 7, 1977, equipment has been added to the facility after that August 7, 1977 applicability date and therefore the Division cannot grant the permit shield for the PSD review requirements.
- As requested by the source in their comments on the draft operating permit, the Division added the provisions of 40 CFR Part 63 Subparts HH and HHH to the shield for non-applicable requirements.

Section IV - General Conditions

- Added an “and” between the Reg 3 and C.R.S. citations in General Condition 3 (compliance requirements).
- Added language from the Common Provisions (new condition 3). Note that we are aware that the language in the Common Provisions may change in the near future, however, we have included the language in the Common Provisions Regulation as it is currently written. In the event that the language in the Common Provisions is revised and in effect prior to issuance of this permit we will include the revised language in the issued permit. With this change the reference to “21.d” in Condition 20 (prompt deviation reporting) will be changed to “22.d”, since the general conditions are renumbered with the addition of the Common Provisions.
- The citation in General Condition 7 (fees) was changed to cite the Colorado Revised Statue. In addition, any specific identification of a fee

(i.e. \$100 APEN fee) or citation of Reg 3 was removed and replaced with the language "...in accordance with the provisions of C.R.S. [appropriate citation]."

- The citation in General Condition 13 (odor) was corrected. In addition, the phrase "Part A" was added to the citation for Condition 13 (odor). Colorado Regulation No. 2 was revised and a Part B was added to address swine operations. Colorado Regulation No. 2, Part B should not be included as a general condition in the operating permit.
- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".
- Added the requirements in Colorado Regulation No. 7, Section V.B (disposal of volatile organic compounds) to General Condition 28.

Appendices

- First Page of Appendices – The phrase "except as otherwise provided in the permit" was added after the word "enforceable" in the disclaimer at the request of EPA.
- Appendix B and C were replaced with revised Appendices.
- The EPA addresses in Appendix D were corrected.